

CLAIMS

1. A multiband radio antenna device (1) for a radio communication terminal, comprising a flat ground substrate (2), and in a plane parallel to said ground substrate a flat parasitic element (7) and a flat antenna element (3) with a feeding point (8), **characterised in** that said antenna element has a first longitudinal member (4), a first transverse member (5) extending from a first end portion of said first longitudinal member, and a second transverse member (6) extending from a centre portion of said first longitudinal member in the same direction as said first transverse member, wherein said parasitic element extends adjacent to an outer portion of and parallel to said second transverse member.
2. The multiband radio antenna device as recited in claim 1, **characterised in** that said feeding point is disposed at a centre portion of said second transverse member.
3. The multiband radio antenna device as recited in claim 2, **characterised in** that said parasitic element has a first ground connection (9) disposed adjacent to said feeding point.
4. The multiband radio antenna device as recited in claim 3, **characterised in** that a second ground connection (10) is disposed at an end portion of said second transverse member opposite said first longitudinal member.
5. The multiband radio antenna device as recited in claim 4, **characterised in** that a third ground connection (11) is disposed at a centre portion of said first transverse member.
6. The multiband radio antenna device as recited in claim 5, **characterised in** that said antenna element has a second longitudinal member (12) extending from said end portion of said second transverse member, away from said first transverse member.
7. The multiband radio antenna device as recited in claim 6, **characterised in** that said antenna element has a third transverse member (13) extending from an end portion of said second longitudinal member opposite said second transverse member, towards said first longitudinal member.
8. The multiband radio antenna device as recited in claim 7, **characterised in** that said antenna element has a fourth transverse member (14) extending from said first

longitudinal member between said second and said third transverse members.

9. The multiband radio antenna device as recited in claim 2, **characterised in** that said feeding point is disposed on a protruding member (15) at said centre portion of the second transverse member, protruding towards first transverse member.

10. The multiband radio antenna device as recited in claim 9, **characterised in** that said protruding member is tapered towards said first transverse member.

11. The multiband radio antenna device as recited in claim 10, **characterised in** that said parasitic element has a leg member (16) extending parallel to a side of the tapered protruding member facing away from said first longitudinal member.

12. The multiband radio antenna device as recited in any of the previous claims, **characterised in** that a an outer portion, extending from said centre portion, of said first transverse member has a side edge facing said second transverse member, which side edge extends at an angle towards said second transverse member, such that said first transverse member widens towards its outer end.

13. The multiband radio antenna device as recited in claim 1, **characterised in** that said parasitic element has one ground connection (9), whereas said antenna element has two ground connections (10,11).

14. The multiband radio antenna device as recited in any of the previous claims, **characterised in** that said ground plane has a longitudinal length of one third of a selected base band.

15. A radio communication terminal (30) comprising a multiband radio antenna device according to any of the previous claims.